

REMARKS

This Amendment After Final Rejection is submitted in response to the outstanding final Office Action, dated January 7, 2009. The present application was filed on October 5, 2005 with claims 1 through 24. Claims 14-17 were cancelled in the Amendment and
5 Response to Office Action dated October 7, 2008. Claims 1-13 and 18-24 are presently pending in the above-identified patent application. Applicant proposes to amend claims 1, 3, 8, 18, and 20 herein.

This amendment is submitted pursuant to 37 CFR §1.116 and should be entered. The Amendment places all of the pending claims, i.e., claims 1-13 and 18-2, in a form that is
10 believed allowable, and, in any event, in a better form for appeal. It is believed that examination of the pending claims as amended, which are consistent with the previous record herein, will not place any substantial burden on the Examiner. In any case, a Request for Continued Examination is being submitted herewith.

In the Office Action, the Examiner has rejected claims 1, 4, 7, 18, 21, 23 and 24
15 under 35 U.S.C. §102(b) as being anticipated by Muller et al. (United States Patent No. 6,021,132), rejected claims 2 and 19 under 35 U.S.C. §103(a) as being unpatentable over Muller et al. in view of Benson et al. (United States Patent No. 6,151,321), rejected claims 3 and 20 under 35 U.S.C. §103(a) as being unpatentable over Muller et al. in view of Kamaraj et al. (United States Patent No. 6,501,757), rejected claim 5 under 35 U.S.C. §103(a) as being
20 unpatentable over Muller et al. in view of Beshai (United States Publication No. 2004/0184448), rejected claims 6 and 22 under 35 U.S.C. §103(a) as being unpatentable over Muller et al. in view of Lavelle et al. (United States Patent No. 6,812,929), rejected claim 8 under 35 U.S.C. §103(a) as being unpatentable over Muller et al. in view of Sindhu et al. (United States Patent No. 6,493,347), rejected claims 9 and 13 under 35 U.S.C. §103(a) as being unpatentable over
25 Muller et al. in view of Manning et al. (United States Patent No. 6,088,736), rejected claim 10 under 35 U.S.C. §103(a) as being unpatentable over the combined Muller et al. and Manning et al. in view of Nation et al. (United States Patent No. 7,301,906), rejected claim 11 under 35 U.S.C. §103(a) as being unpatentable over the combined Muller - Manning et al. in view of Davis (United States Publication No. 2007/0208876), and rejected claim 12 under 35 U.S.C.
30 §103(a) as being unpatentable over Muller - Manning et al. in view of Miller et al. (United States Patent No. 6,247,058).

Independent Claims 1 and 18

Independent claims 1 and 18 were rejected under 35 U.S.C. §102(b) as being anticipated by Muller et al. Regarding claim 1, the Examiner asserts that Muller discloses storing at least a portion of a packet in contiguous banks of a first buffer (FIG. 3A, banks =
5 buffer #1, buffer #2, buffer #3; col. 8, lines 37-42). In the Response to Arguments section of the Office Action, the Examiner asserts that the first buffer equates with the shared memory 230 of Muller.

It is unclear if the Examiner is equating a “bank” with a single memory line or a number of memory lines. In the former case, it is noted that a “bank” is well known in the art to
10 comprise more than one memory line, and that this interpretation would therefore be inappropriate. In the latter case, it is noted that, in the text cited by the Examiner, Muller teaches:

Referring now to FIG. 3A, a logical view of shared memory 230 is depicted having stored therein packet data in a number of buffers. In this example,
15 the shared memory 230 is segmented into a number of buffers (pages) of programmable size. All the buffers may have the same size, or alternatively, individual buffer sizes may vary. In another embodiment, *the buffers may be further subdivided into a number of memory lines*. Each line may be used for storing packet data. In other embodiments, control information may also be
20 associated with each of the memory lines. The control information may include information for facilitating efficient access of the packet data such as an end of packet field. The separation of control information and data increases the efficiency of accesses to and from the shared memory 230.
(Col. 8, lines 37-54; emphasis added.)

Muller, however, does *not* disclose or suggest multiple banks and multiple buffers,
and therefore cannot disclose or suggest contiguous banks of a first buffer of two or more buffers;
Muller also does *not* disclose or suggest *storing at least a portion of a packet in contiguous*
banks of a first buffer of two or more buffers. (Applicants note that the limitation “contiguous
banks” is an affirmative limitation in the claims.) Independent claims 1 and 18, as amended,
30 require storing at least a portion of a packet in contiguous banks of a first buffer of said two or more buffers.

Thus, Muller et al. do not disclose or suggest storing at least a portion of a packet in contiguous banks of a first buffer of said two or more buffers, as required by independent claims 1 and 18, as amended.

Independent Claim 9

Independent claim 9 was rejected under 35 U.S.C. §103(a) as being unpatentable over Muller et al. in view of Manning et al. In particular, the Examiner asserts that Muller discloses maintaining a buffer usage count for each of a number of buffers in a shared memory (Abstract; col. 7, lines 25-27; and col. 9, lines 35-37). The Examiner asserts that Muller discloses a counter for monitoring a buffer usage count (Abstract; usage count) provides an indication of the sum (write) over all packets in said at least one of said buffers of the number of output ports (two output ports) toward which each of said packet is destined (col. 12, lines 27-31). The Examiner acknowledges that Muller is silent to disclosing wherein said at least one of said buffer contains two or more packets, but asserts that Manning discloses (that a) buffer provides an indication of the sum (col. 5, lines 25-30; total number of cells) over all packets in said at least one of said buffers of the number of output ports toward which each of said packets is destined, wherein said at least one of said buffers contains two or more packets (col. 5, lines 25-30; cells).

Applicants note that independent claim 9 requires *wherein said buffer usage count provides an indication of a sum over all packets in said at least one of said buffers of a number of output ports toward which each of said packets is destined, wherein said at least one of said buffers contains two or more packets*. In the text cited by the Examiner, Muller teaches:

The buffer tracking unit 329 processes the input port's 0010b notification which indicates there are 3 buffer owners.

Read: 1110b

Modify: 1110b + 0011b + 0001b = 0010b

Write: 0010b

The other two output ports 206 complete transmission of 0010b the buffer and so notify the buffer tracking unit 329.
(Col. 12, lines 27-31.)

Muller does *not* disclose or suggest, however, that the buffer usage count provides an indication of a sum over all packets in the buffer of a number of output ports toward which each of the packets is destined. (Note that packets indicates that the sum is over two or more packets.) In fact, Muller does not even disclose or suggest that the buffer usage count provides an indication of a sum over all packets.

Also, in the text cited by the Examiner, Manning teaches:

The total number of cells received by the receiver element 14 can be derived by adding Buffer__Counter 32 to Fwd__Counter 38. The latter is

employed in correcting the transmitter element 12 for errored cells during the check event, as described below. Fwd__Counter 38 is twenty-eight bits wide in the first embodiment.
(Col. 5, lines 25-30.)

5 Manning teaches that Buffer__Counter 32 “provides an indication of the number of buffers 28 in the downstream element 14 which are currently being used for the storage of data cells. As described subsequently, this value is used in providing the upstream element 12 with a more accurate picture of buffer availability in the downstream element 14” (col. 4, line 66, to col. 5, line 4) and that Fwd__Counter 38 is “a running count of the total number of cells
10 forwarded through the receiver element 14” (col. 5, lines 20-21). Thus, Manning also does *not* disclose or suggest that the buffer usage count provides an indication of a sum over all packets in the buffer of a number of output ports toward which each of the packets is destined. (Note that packets indicates that the sum is over two or more packets.) In fact, Manning does not even disclose or suggest that the buffer usage count provides an indication of a sum over all packets.

15 Thus, Muller and Manning, alone or in combination, do not disclose or suggest wherein said buffer usage count provides an indication of a sum over all packets in said at least one of said buffers of a number of output ports toward which each of said packets is destined, wherein said at least one of said buffers contains two or more packets, as required by independent claim 9.

20 Dependent Claims 2-8, 10-14 and 19-24

 Claims 2-8, 10-14, and 19-24 are dependent on independent claims 1, 9, and 18, respectively, and are therefore patentably distinguished over Muller et al., Manning et al., Benson et al., Kamaraj et al., Beshai, Lavelle et al., Sindhu et al., Nation et al., Davis, and Miller et al., alone or in combination, because of their dependency from amended independent claims
25 1, 9, and 18 for the reasons set forth above, as well as other elements these claims add in combination to their base claim.

Conclusion

 All of the pending claims following entry of the amendments, i.e., claims 1-13 and 18-24, are in condition for allowance and such favorable action is earnestly solicited.

30 If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,



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